To: MORASH, MELANIE[morash.melanie@epa.gov]; Hiatt, Gerald[Hiatt.Gerald@epa.gov]
From: Stralka, Daniel
Sent: Tue 8/20/2013 3:51:17 PM
Subject: RE: Comments on the TCE short-term levels from our PRPs

Melanie,

We have seen this before. This was the response to our initial interpretation on the TCE short-term concerns presented to the MEW companies in the spring of 2012. They subsequently presented this to EPA HQ and ORD. Since then HQ and ORD have their own draft IRIS addendum which may be out in the next month or so. Interestingly, there has been no push back on the absolute value or the long-term numbers which are of the same order of magnitude. The only difference is the time period of concern that we have to operate, not a small difference in execution but both cancer and non-cancer values are still very close. 0.43 ug/m3 for cancer and 2 ug/m3 for non-cancer for chronic exposures.

From: MORASH, MELANIE
Sent: Tuesday, August 20, 2013 8:39 AM
To: Hiatt, Gerald; Stralka, Daniel
Subject: Comments on the TCE short-term levels from our PRPs

From: Bertaut, Edgard [mailto:Edgard.Bertaut@ATImetals.com]
Sent: Tuesday, August 20, 2013 5:12 AM
To: Papler, Roger@Waterboards (Roger.Papler@waterboards.ca.gov)
Cc: MORASH, MELANIE; Bradshaw, Don (Don.Bradshaw@arcadis-us.com); Neary, Leigh (Leigh.Neary@arcadis-us.com); Kalve, Erica (Erica.Kalve@arcadis-us.com)
Subject: T-S/MV - Teledyne: Comments - Report/Plan

Roger,

Thank you for your comments. We are considering your comments and will get back to you if we have any questions.

In the meantime, confirming our prior discussions, EPA Region 9's interim short-term TCE action level is not based upon sound science. A detailed explanation of this lack of sound science is contained in the attached *TCE Interim Short-Term Removal Action Level White Paper* prepared by Geosyntec Consultants and Exponent. As stated in the Executive Summary therein:

While there is potentially suggestive evidence of a causal association between TCE and developmental effects, the evidence is weak; it includes contradictory findings, and some of the key studies have fundamental methodological flaws. Consequently, as described in published reviews of the literature, there is substantial uncertainty, contradictory evidence, and even controversy regarding the identification of a causal association between TCE and developmental effects. Furthermore, other scientific and regulatory organizations have specifically set out to develop short-term exposure limits for TCE, and these agencies have not selected a developmental health endpoint as the basis of their recommended limits, even though most of the developmental toxicological and epidemiological studies that were evaluated as the basis of the RfC were available when the exposure limits were developed.

…

The explicit identification of TCE as a teratogen and the identification of a corresponding and appropriate exposure averaging time was not a focus or goal associated with the EPA (2011) TCE toxicological review. Because of the importance of the issue in the possible derivation and use of a RAL for risk management and risk communication, the issue of a causal link between TCE exposure and developmental effects warrants a more focused evaluation. A formal evaluation of any potential link between TCE exposure and developmental effects, based on careful consideration of the weight of scientific evidence, is necessary to responsibly inform risk

management and risk communication issues. For the reasons detailed below, this White Paper concludes that the weight of scientific evidence does not support a conclusion that a causal connection exists between exposure to TCE and CCD in humans and the application of a RAL based on teratogenicity is unwarranted.

Therefore, we believe that it is inappropriate to apply EPA Region 9's interim short-term TCE action level anywhere, including at the Semiconductor/Spectra-Physics Site.

Regards,

Edgard

Edgard Bertaut

Senior Environmental Manager

Allegheny Technologies Incorporated

1000 Six PPG Place

Pittsburgh, PA 15222-5479

(301) 526-1710

Edgard.Bertaut@ATImetals.com

From: Papler, Roger@Waterboards [mailto:Roger.Papler@waterboards.ca.gov]
Sent: Friday, August 16, 2013 8:10 PM
To: Bertaut, Edgard
Cc: morash.melanie@epa.gov; leigh.neary@arcadis-us.com; jbenitez@ecp-llc.com; erica.kalve@arcadis-us.com; leigh.neary@arcadis-us.com; jgregory@fbm.com; mkking@ekiconsult.com; smurtagh@ecp-

llc.com
Subject: [EXTERNAL EMAIL] :T-S/MV - Teledyne: Comments - Report/Plan

Hello Edgard:

Thank you for submitting the 25July13 *Methane Mitigation System Expansion System Startup Report and Performance Monitoring Plan* (Report/Plan).

The Regional Water Board and USEPA (Agencies) reviewed the Report/Plan. The Report portion of the Report/Plan comprises Sections 1 through 3 and Plan portion of the document comprises Section 4 in the context of the current enhanced reductive dechlorination (ERD) remedial activities. Specific and generic comments are presented below.

Specific

Report

Section 1.1

This section states that "no further investigations or remedial actions were required at the buildings at the sites at that time." To clarify, this section should include language that updates the vapor intrusion evaluation procedures. One option is to add the following sentence: "Subsequent changes in vapor intrusion evaluation methods and action levels have necessitated a reconsideration of the vapor intrusion pathway and additional indoor air sampling at properties on and downgradient of the source areas."

Section 1.3

This section refers the reader to the 4April13 revised version of the *Focused Feasibility Study* (Revised FFS) where the indoor analytical (IA) analytical data is sequestered within the document and not easily located. The Report/Plan needs to include the IA data such that the data is easy to find.

This section also states that the indoor air samples results confirm that significant vapor intrusion does not appear to be occurring in the building despite the concentrations of VOCs detected in soil vapor. The Agencies disagree that enough data has been collected to make this statement. The building has not yet been sampled under the full range of ventilation/pressurization and seasonal conditions, thus the data may not capture the true vapor intrusion picture, or be sufficient enough to account for temporal variability in indoor air TCE concentrations. The major project objective, with respect to vapor intrusion, is to evaluate the pathway using the multiple lines of evidence approach to be able to make a recommendation to select a VI remedy, if necessary. The vacant portion of the property may be developed (or the occupied portion redeveloped) in the future, and information on the potential for vapor intrusion under a variety of building-use scenarios will be critical to the current or future property owner/tenant. Groundwater conditions at the site are changing and the collection of sufficient lines of evidence will facilitate the determination of the appropriate response action related to VI.

Section 2.1

This section may have reversed the installation and screening depths indicating soil vapor (SV) wells that indicates the SV wells were installed to 8.0 feet below ground surface (bgs) and screened at 4.5 to 9.0 feet bgs. Please clarify how an SV well can be installed to a shallower depth than the well can be screened or correct this section.

Plan

Section 4.1

1st Bullet: This section does not discuss prior IA results for Teledyne, propose including the maintenance person in the walkthrough or IA sampling mostly in the Winter time, or commit to IA sampling after turning off the heating, ventilation and air conditioning system for at least 36 hour, or include Region 9 USEPA's short-term indoor air response action levels for trichloroethene (TCE). Including the maintenance man could be critical to understand the building's heating, ventilation and air conditioning (HVAC) system operation and certain critical building features. IA sampling placement could miss potential conduits for IA sampling without proper HVAC understanding and building features such as interior sumps. The maintenance person may also have critical information regarding discrete ventilation zones within the building footprint which would help locating IA samples.

3rd Bullet: This section states that approximately seven indoor air samples will be collected. The number of indoor air samples collected should be based on a site-specific evaluation following the building walkthrough, which may result in the identification of additional or fewer samples than the target seven. This section should also propose breathing zone and, as appropriate, preferential pathway samples that will also be placed to evaluate the effect of potential preferential pathways on indoor air quality, which

may not necessarily be in high occupancy areas but could result in unacceptable exposures. These sample locations may include small offices in separate ventilation zones, floor drains, storage rooms, fire risers, electrical conduits, elevator shafts, or other floor-penetrated areas on the lowest floor. This section indicates that sample duration may be 8-hours, 10-hours, or 12-hours. Consistent with the sampling methodology at the other South Bay sites, the Agencies will expect samples to be collected over a 10-hour window which may be adjusted to a 12-hour window if necessary based on typical building occupancy.

4th Bullet: This subsection indicates that the HVAC system will be turned off at least 36 hours prior to conducting the sampling event if feasible. As per the Generic comments section, the HVAC and methane mitigation systems must be turned off for the requisite time prior to collecting indoor air samples. However, the Agencies are open to considering alternatives on a case-by-case basis, when total or partial system deactivation is infeasible.

7th & 8th Bullets: These subsections cite short-term health-risk based criteria and should also indicate that site data should be compared to the recently revised 2013 EPA Regional Screening Levels (RSLs) and the ATSDR Minimum Risk Levels (MRLs), and EPA Region 9's interim short-term action levels for TCE. These levels will be clarified shortly in a Regional Water Board letter to TDY Industries, LLC and Thermo Fisher Scientific, Inc. Table 3 should re-evaluate the indoor air data using these current action levels. If needed, the Agencies are willing to convene a meeting to discuss the changes to the TCE and PCE action levels that can be accessed as follows:

-May 2013 RSL tables may be found at http://www.epa.gov/region9/superfund/prg

- ATSDR MRL table may be found at http://www.atsdr.cdc.gov/mrls/mrllist.asp

The units are all in ppm (mg/m3) for inhalation, while the RSL table is in ug/m3, so a conversion will need to be performed. A conversion calculator may be found at http://www.skcinc.com/converter/converter.asp. The 8th bullet of this subsection also states that confirmation sampling will probably be conducted if *indoor air* concentrations exceed these criteria, confirmation. This subsection should clarify with time periods. One option is to add the following language: "and, as appropriate for example, in the case of exceedances of EPA Region 9's interim short-term TCE action levels, immediate action, to be completed within several days or weeks."

Last Paragraph: This subsection should also be revised to include updated USEPA screening levels.

Section 4.2: This section does not propose analytical sampling the interior SV wells for a long enough time or reducing soil vapor monitoring to quarterly screening with criteria for frequency reduction. This section also does not define 'elevated' or 'substantive'. Analytical sampling of the interior SV wells should be sampled as long as the monitoring data justifies such sampling. Two months is not long enough time to provide enough data to evaluate the end of analytical vapor sampling. We recommend starting with a four- to six-month analytical sampling period and reducing the analytical sampling based on the IA data. Criteria for reducing IA sampling or SV monitoring needs to be based on the IA and SV data and needs clarification. The proposed analytical sampling and SV monitoring reduction schedules in Bullets 1 through 4 appear to contradict each other and needs clarification.

Section 4.3: As with Section 4.2, this section does not define 'substantive'. This section proposes IA monitoring 60 days after followup ERD injections and may not be soon enough.

Generic

With Regional Water Board, USEPA, and company representatives present during a July 25, 2013 meeting at the Regional Water Board, it was stated that the indoor air vapor intrusion investigative work for the 1300 Terra Bella (former Teledyne Semiconductor) building would be presented in the Report/Plan. Please revise the Report/Plan to more specifically address the vapor intrusion study, as separate from and distinct from the ERD-related methane mitigation work.

The main objective of the vapor intrusion evaluation is to evaluate the pathway using the multiple lines of evidence approach to be able to make a recommendation to select a VI remedy as needed. The vacant portion of the property may be developed, or the occupied portion redeveloped, in the future. Information on potential vapor intrusion under a variety of building-use scenarios may be critical to the health of the current or future property owner/tenant. The building has not yet been sampled under the full range of ventilation/pressurization and seasonal conditions, thus the data collected to date may not capture the true vapor intrusion picture, or be sufficient enough to account for temporal variability in indoor air TCE concentrations. Groundwater conditions at the site are changing and the collection of sufficient lines of evidence will support the appropriate response action related to potential vapor intrusion.

Please revise the Report/Plan to address the above comments and submit the revised version by **COB 20Sept13.**

Roger W. Papler P.G.

Engineering Geologist

San Francisco Bay Regional Water Quality Control Board

1515 Clay Street, Suite 1400

Oakland, CA 94612

Please visit ATI's all-new website: www.atimetals.com